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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re patent
appln. of: Thomas Welsh et al.

Serial No.: 09/935,926

Filed: August 23, 2001

For: **LINEAR COMPRESSION
LATCH**

Examiner: Thomas Y. Ho

Art Unit: 3677

Att'y Docket: 195-01

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Dated: July 21, 2003

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BOARD OF PATENT APPEALS
AND INTERFERENCES

APPEAL BRIEF

Sir:

This appeal brief is submitted under certificate of mailing on Monday, July 21, 2003 in support of Notice of Appeal mailed under Certificate of Mailing on May 16, 2003, in response to the Examiner's Action mailed November 22, 2002 in the above-referenced patent application finally rejecting claims 3 and 5-8. A petition for a one month extension of time accompanies this appeal brief.

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I. Real Party in Interest

This application has been assigned to Southco, Inc., a Delaware corporation.

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II. Related Appeals and Interferences

There are no related appeals or interferences.

III. Status of the Claims

The claims in the application are claims 3 and 5-8.

No claims stand allowed.

Claims 3 and 5-8 stand finally rejected.

The claims on appeal are claims 3 and 5-8.

IV. Status of Amendments

The claims were amended in response to the initial Examiner's Action in the application. However, no amendments were proposed in response to the Examiner's Action finally rejecting the pending claims. An Advisory Action mailed May 16, 2003 stated that "[f]or purposes of Appeal, the proposed amendment(s) . . . will be entered . . ." However, there were no pending proposed amendments pursuant to 37 C.F.R. 1.116.

V. Summary of the Invention

The present invention provides a simple linear compression latch that can be easily and securely mounted to a door or panel.

The linear compression latch comprises a housing and a lever handle rotatable by an operator between a first position and a second position. The lever handle is mounted in the housing. The latch also comprises a pawl mounted for substantially linear motion. The pawl is actuated by rotation of the lever handle. The pawl travels

substantially linearly between an open position to a closed position as the lever handle is rotated between the first position to second position. The pawl is mounted to travel between the open position along a first path and an intermediate position. Further, the pawl is mounted to travel in a second path in a direction substantially perpendicular to the first path between the intermediate position and the closed position.

Preferably, the first path is linear. Further, it is preferred that the second path be linear.

In addition, the latch optionally includes a carriage in which the pawl is mounted, and the carriage is mounted for linear motion within the housing.

Finally, the latch optionally further comprises connection means for rotatably connecting the lever handle and the pawl.

VI. Issue Presented

Whether the Examiner erred in his conclusion that the combination of U.S. Patent 5,201,557 ("Schlack", see copy enclosed for Board's convenience) and U.S. Patent 4,858,970 ("Tedesco", see copy enclosed for Board's convenience) renders claims 3 and 5-8 unpatentable as obvious under 35 U.S.C. 103(a).

VII. Grouping of Claims

The claims comprise a single group.

VIII. Argument

The Examiner's rejection is not correct.

A. THE EXAMINER MISCONSTRUES THE PRIOR ART

The Examiner's comments in the Action mailed November 11, 2002 responding to applicants' amendment filed September 13, 2002 reflect a misunderstanding of the disclosure of the primary reference upon which the sole rejection is based.

Schlack discloses a slide fastener that secures a door of an electrical cabinet to the cabinet frame, as shown in Schlack Figures 3 and 4 reproduced below.

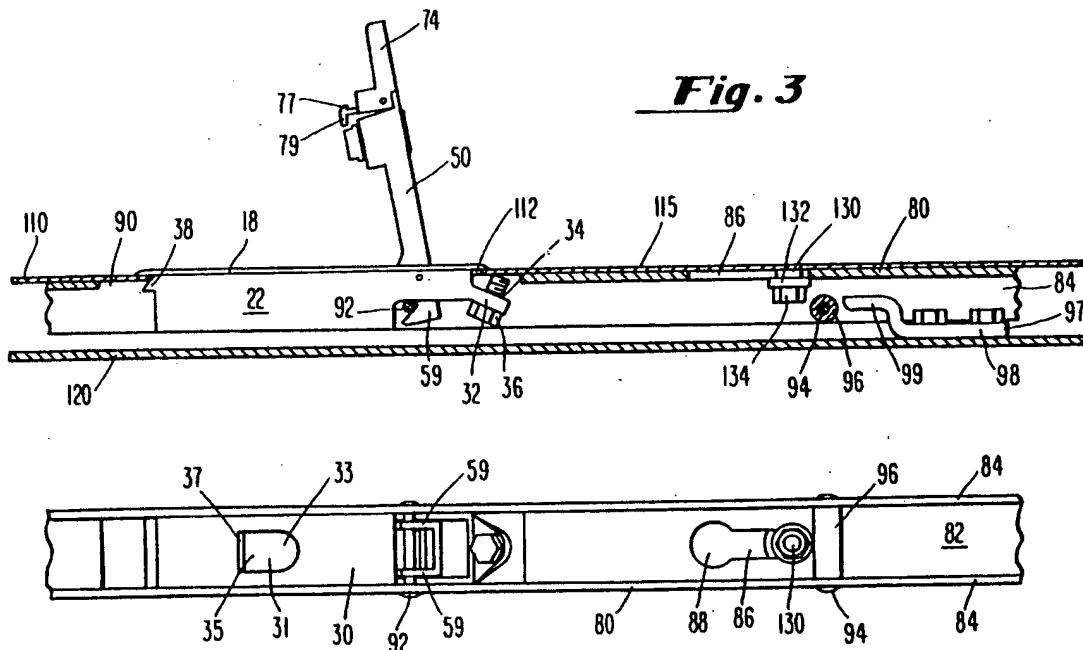


Fig. 4

As the lever assembly 50 is rotated downwardly (counterclockwise in Figure 3), a slide assembly 80 (fabricated from channel stock) is pushed from left to right in a strictly linear motion, as it is confined between the lower surface of the door and the upper surfaces of a plurality of friction-reducing washers 132. The washers 132 are mounted on posts 130 passing through respective slots 86 formed in the base plate 82 of the slide assembly 80 (col. 4, lines 30-47).

The slide assembly 80 includes a plurality of spaced rods 94, extending between and perpendicular to the side 84 of the slide assembly 80. A rotatable sleeve

96 is mounted on each of the rods 94. The rods 94 are positioned to be engaged by a plurality of respective "s"-shaped slide keepers 98. The slide keepers 98 have a first leg 97 bolted to the cabinet frame 120. The second leg 99 has a camming surface formed thereon, such that as the slide faster 10 is closed, the slide assembly 80 is moved from left to right in Figure 3. The sleeves 96 are forced under the second legs 99, thereby drawing the door 110 towards the frame 120 and compressing the door gasket between the door 110 and the frame 120 of the cabinet 100. The resulting locked position of the latch is shown in Schlack Figs. 5 and 6 reproduced below.

The Examiner considers this disclosure, and concludes that "[t]he slide fastener disclosed by Schlack does in fact have a first linear path, and second linear path, with both paths perpendicular to one another." Office Action of November 22, 2002, page 5. The Examiner concludes that "[t]o go 'under' the legs 99, the sleeves 96 must then travel a distance in a perpendicular direction to get under legs 99."

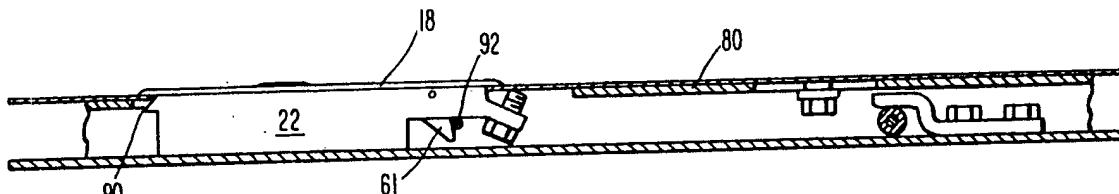


Fig. 5

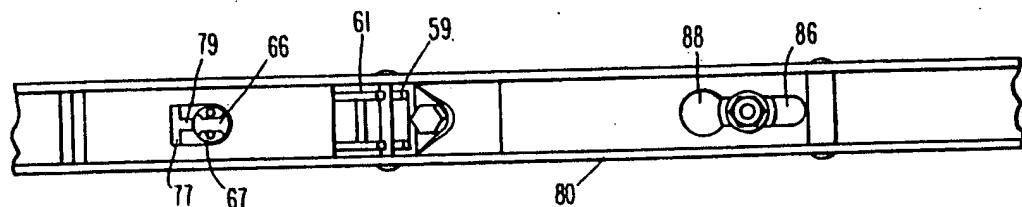


Fig. 6

A moment's reflection shows that the Examiner's understanding of this motion is a physical impossibility.

The camming surface on the second leg 99 must deflect the sleeve 96 "under" the leg 99, as stated by the Examiner. However, at the same time that sleeve 96 is traveling "downward" it must be traveling from left to right in Figure 3. Although this motion can be resolved into two perpendicular components, the path traced out by the sleeve as it engages the camming surface is not perpendicular to the initial path.

This motion does not meet the limitation of applicants' independent claim, which requires that the "second path" of the pawl be "substantially perpendicular" to the "first path." The "second path" of the sleeve 96 of Schlack simply cannot be "substantially perpendicular" to the "first path" because this would result in an inoperable latch. Elementary mechanics dictates that there is simply no physically possible camming surface that can convert motion in a first direction into motion in a second direction perpendicular to the first.

The Examiner's correct observation that the sleeve must travel "under" the second leg does not support the conclusion that the motion occurs over a path that meets the limitations of the present claims. The camming surface must guide the motion along a path intermediate between the paths that applicant's independent claim requires.

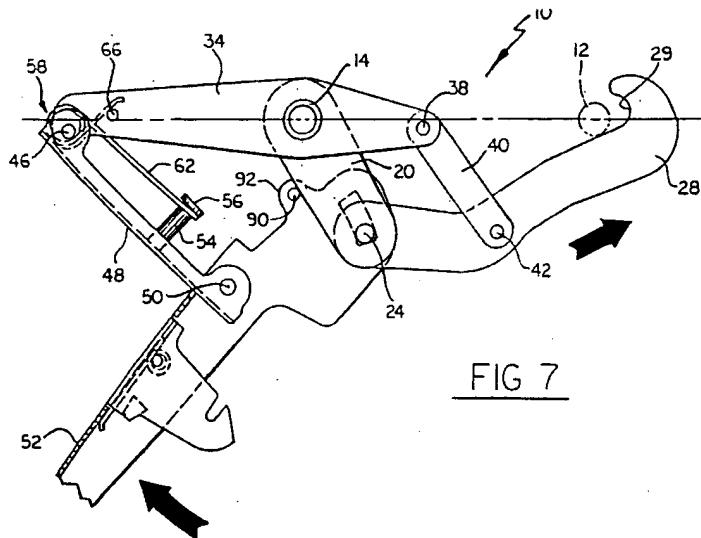
B. THE COMBINATION OF SCHLACK AND TEDESCO DOES NOT MAKE OBVIOUS THE SUBJECT MATTER OF CLAIMS 3 and 5-8.

Claims 3 and 5-8 stand finally rejected under 35 U.S.C. 103(a) as being unpatentable over Schlack in view of Tedesco. Careful consideration and reversal of the rejection are respectfully requested.

In responding to applicants' arguments, the Examiner states that the Tedesco reference was used to teach an even greater, or more obvious, perpendicular path, than does Schlack. Office Action of November 22, 2002, page 5. As shown above, Schlack teaches no such thing. Neither does Tedesco.

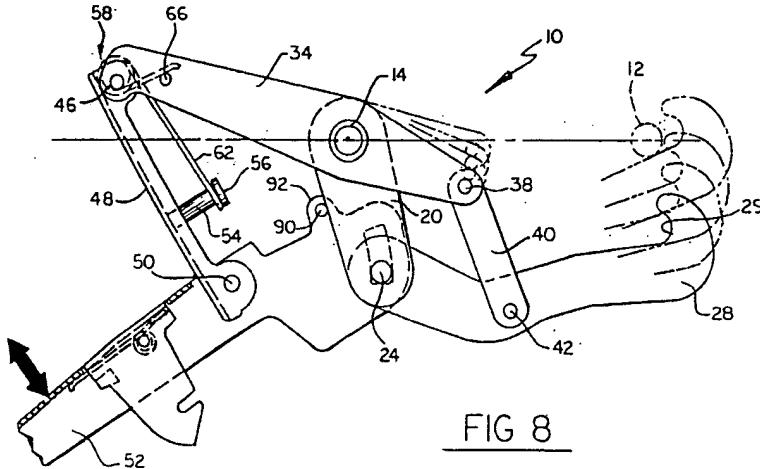
Tedesco discloses a mechanically complex latch for use in aircraft.

In making the final rejection, the Examiner stated that Tedesco teach a pawl 28 mounted to travel between an open position along a first path and an intermediate position where the first path is linear (referencing Fig. 7) and where the pawl is mounted to travel in a second path in the direction perpendicular to the first path between an intermediate position and a closed position where the second path is linear (referencing Fig. 8). Tedesco Figs. 7 and 8 are reproduced below.



However, with reference to Fig. 7, Tedesco states that "because cover 48 prevents the free clockwise rotation of handle 52, the clockwise rotational motion and force applied to handle 52 is transferred at cover pin 50 to pin 24 as a counterclockwise motion that causes the hook 28 to move in a counterclockwise direction about the mounting bushing 14. This is best seen in FIG. 7 . . ." (col. 5, lines 22-28, emphasis added). Continued rotational movement of the handle 52 is then transformed by the complex linkage of the latch to clockwise rotational motion of the hook 28, as shown in Fig. 8.

Thus, the motion that the Examiner characterizes as "linear" is described by Tedesco as a rotational motion. Similarly, the subsequent motion of the hook 28 illustrated in Fig. 8 is rotational motion around the pivot point 14. There is no sequence of two linear motions as perceived by the Examiner.



This sequence of two rotational (not linear) motions is confirmed by Tedesco's description of closure of the latch:

When the low profile latch 10 is to be closed, it will be seen from FIG. 8 that a counterclockwise motion of handle 52 will cause the latch 28 to be lifted to a point to the right of keeper 12. Further rotation in a counterclockwise direction of handle 52 will cause the hook 28 to rotate in a clockwise direction for closing upon keeper 12. This movement is shown in FIG. 7 with the motion of the handle 52 and hook 28 opposing the arrows shown therein. (col. 5, lines 42-50, emphasis added).

The Examiner concluded that it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the latch of Schlack, with first and second pawl paths perpendicular to one another for pawl movement between

open, intermediate, and closed positions as taught by Tedesco, in order to make the latch more secure by closing tighter.

However, neither Schlack nor Tedesco disclose first and second pawl paths that are perpendicular to one another. In addition, neither Schlack nor Tedesco disclose both substantially linear travel along a first path between a first position and an intermediate position, and then substantially linear travel along a second path between the intermediate position and the second position.

Further, the Examiner fails to explain how one of ordinary skill in the art could attempt to combine the cited references. The only feature the two latches appear to have in common is a rotatable handle for actuating the latch. In his remarks regarding applicants' arguments, the Examiner concedes that "the Tedesco latch is not a teaching to replace parts." (Examiner's Action of November 11, 2002, page 5, line 4). Instead, the Examiner states that "[t]he Tedesco reference was used to teach an even greater, or more obvious, perpendicular second path to show that it is old and well known in the art to have a pawl travel in a first and second perpendicular linear paths to allow for longer pawl travel." (Examiner's Action of November 11, 2002, page 5, lines 9-11). However, as shown above, neither reference cited by the Examiner actually exemplifies such motion, and no *prima facie* case of obviousness has been established. The Examiner confuses the apparent simplicity of applicants' invention with obviousness. Nonetheless, simplicity is not an indicia of obviousness. In fact, "simplicity does not establish obviousness; indeed, simplicity may represent a significant and unobvious advance over the complexity of prior art devices." Sensonics, Inc. v. Aerosonic Corp., 81 F.3d 1566, 1570, 38 USPQ2d 1551, 1554 (Fed. Cir. 1996).

There is nothing in the combination of Schlack and Tedesco, or either cited reference considered individually, that would render the presently claimed invention obvious to one of ordinary skill in the art at the time the invention was made.

Reconsideration and reversal of the Examiner's rejection entered under 35 U.S.C. 103(a) over Schlack in view of Tedesco are respectfully requested for these reasons.

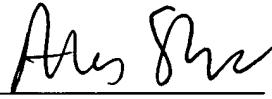
IX. Conclusion

As all claims as amended are believed to be in condition for allowance, an early favorable action and reversal of the rejections entered by the Examiner are earnestly solicited.

July 21, 2003

Respectfully submitted,

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APPENDIX

CLAIMS ON APPEAL:

3. A linear compression latch according to claim 8 wherein the first path is linear.
5. A linear compression latch according to claim 8 wherein the second path is linear.
6. A linear compression latch according to claim 5 further comprising a carriage, the carriage being mounted for linear motion within the housing, the pawl being mounted within the carriage.
7. A linear compression latch according to claim 6 further comprising connection means for rotatably connecting the lever handle and the pawl.
8. A linear compression latch comprising:
 - a housing;
 - a lever handle rotatable by an operator between a first position and a second position, the lever handle being mounted in the housing;
 - a pawl mounted for substantially linear motion, the pawl being actuated by rotation of the lever handle and traveling substantially linearly between an open position to a closed position as the lever handle is rotated between the first position to second position;
 - wherein the pawl is mounted to travel between the open position along a first path and an intermediate position; and
 - wherein the pawl is mounted to travel in a second path in a direction substantially perpendicular to the first path between the intermediate position and the closed position.